NPTEL Video Course - Mathematics - NOC:Engineering Mathematics-II

Subject Co-ordinator - Prof. Jitendra Kumar

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Vector Functions
Lecture 2 - Vector and Scalar Fields
Lecture 3 - Divergence and Curl of a Vector Field
Lecture 4 - Line Integrals
Lecture 5 - Conservative Vector Field
Lecture 6 - Greenâ s Theorem
Lecture 7 - Surface Integral - I
Lecture 8 - Surface Integral - II
Lecture 9 - Stokesâ Theorem
Lecture 10 - Divergence Theorem
Lecture 11 - Complex Numbers and Functions
Lecture 12 - Differentiability of Complex Functions
Lecture 13 - Analytic Functions
Lecture 14 - Line Integral
Lecture 15 - Cauchy Integral Theorem
Lecture 16 - Cauchy Integral Formula
Lecture 17 - Taylorâ s Series
Lecture 18 - Laurentâ s Series
Lecture 19 - Singularities
Lecture 20 - Residue
Lecture 21 - Iterative Methods for Solving System of Linear Equations
Lecture 22 - Iterative Methods for Solving System of Linear Equations (Continued...)
Lecture 23 - Iterative Methods for Solving System of Linear Equations (Continued...)
Lecture 24 - Roots of Algebraic and Transcendental Equations
Lecture 25 - Roots of Algebraic and Transcendental Equations (Continued...)
Lecture 26 - Polynomial Interpolation
Lecture 27 - Polynomial Interpolation (Continued...)
Lecture 28 - Polynomial Interpolation (Continued...)
Lecture 29 - Polynomial Interpolation (Continued...)

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Lecture 30 - Numerical Integration
Lecture 31 - Trigonometric Polynomials and Series
Lecture 32 - Derivation of Fourier Series
Lecture 33 - Fourier Series -Evaluation
Lecture 34 - Convergence of Fourier Series - I
Lecture 35 - Convergence of Fourier Series - II
Lecture 36 - Fourier Series for Even and Odd Functions
Lecture 37 - Half Range Fourier Expansions
Lecture 38 - Differentiation and Integration of Fourier Series
Lecture 39 - Besselâ s Inequality and Parsevalâ s Identity
Lecture 40 - Complex Form of Fourier Series
Lecture 41 - Fourier Integral Representation of a Function
Lecture 42 - Fourier Sine and Cosine Integrals
Lecture 43 - Fourier Cosine and Sine Transform
Lecture 44 - Fourier Transform
Lecture 45 - Properties of Fourier Transform
Lecture 46 - Evaluation of Fourier Transform - Part 1
Lecture 47 - Evaluation of Fourier Transform - Part 2
Lecture 48 - Introduction to Partial Differential Equations
Lecture 49 - Applications of Fourier Transform to PDEs - Part 1
Lecture 50 - Applications of Fourier Transform to PDEs - Part 2
Lecture 51 - Laplace Transform of Some Elementary Functions
Lecture 52 - Existence of Laplace Transform
Lecture 53 - Inverse Laplace Transform
Lecture 54 - Properties of Laplace Transform
Lecture 55 - Properties of Laplace Transform (Continued...)
Lecture 56 - Properties of Laplace Transform (Continued...)
Lecture 57 - Laplace Transform of Special Functions
Lecture 58 - Laplace Transform of Special Functions (Continued...)
Lecture 59 - Applications of Laplace Transform
Lecture 60 - Applications of Laplace Transform (Continued...)
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